

What is claimed is:

1. An imaging system comprising:

an infrared light emitter configured to emit infrared light;

an image pickup unit configured to pick up an image of a place irradiated with the infrared light and convert the picked-up image into an electric signal; and

an image processing unit configured to periodically change a signal accumulation time of the image pickup unit and periodically and continuously provide images of different exposure values,

the image processing unit extracting a high-brightness block surrounded with a medium-brightness area from a first image of the periodically provided images, and according to a degree of the medium-brightness area, controlling a signal accumulation time of a second image to be picked up.

2. The imaging system of claim 1, wherein:

the image processing unit divides the first image into high-brightness blocks, medium-brightness blocks, and low-brightness blocks, and according to the number of medium-brightness blocks around a group of high-brightness blocks, controls an image signal accumulation time of the second image.

3. The imaging system of claim 2, wherein:

the image processing unit divides the first image into a plurality of blocks, finds an average brightness value of each of the blocks, and according to the average brightness values of the blocks and two thresholds, classifies the blocks into high-brightness blocks,

medium-brightness blocks, and low-brightness blocks.

4. The imaging system of claim 2, wherein:

the image processing unit divides the first image into a plurality of blocks, classifies pixels in each of the blocks into high-brightness pixels, medium-brightness pixels, and low-brightness pixels according to two thresholds, finds a maximum one of the numbers of the high-, medium-, and low-brightness pixels in each of the blocks, determines the brightness level of the pixels of the maximum number as the brightness level of the block, and according to the determined brightness levels of the blocks, classifies the blocks into high-brightness blocks, medium-brightness blocks, and low-brightness blocks.

5. The imaging system of claim 2, wherein:

the image processing unit finds the number of medium-brightness blocks surrounding each high-brightness block, finds a maximum one of the numbers of the surrounding medium-brightness blocks, and controls an image signal accumulation time of the second image according to the maximum number.

6. The imaging system of claim 3, wherein:

the image processing unit finds the number of medium-brightness blocks surrounding each high-brightness block, finds a maximum one of the numbers of the surrounding medium-brightness blocks, and controls an image signal accumulation time of the second image according to the maximum number.

7. The imaging system of claim 4, wherein:

the image processing unit finds the number of medium-brightness blocks surrounding each high-brightness block, finds a maximum one of the numbers of the surrounding medium-brightness blocks, and controls an image signal accumulation time of the second image according to the maximum number.

8. The imaging system of claim 2, wherein:

the image processing unit finds the number of high-brightness blocks that form a group, the number of medium-brightness blocks around the group, and a reference number of medium-brightness blocks related to the group, and controls an image signal accumulation time of the second image according to these numbers.

9. The imaging system of claim 3, wherein:

the image processing unit finds the number of high-brightness blocks that form a group, the number of medium-brightness blocks around the group, and a reference number of medium-brightness blocks related to the group, and controls an image signal accumulation time of the second image according to these numbers.

10. The imaging system of claim 4, wherein:

the image processing unit finds the number of high-brightness blocks that form a group, the number of medium-brightness blocks around the group, and a reference number of medium-brightness blocks related to the group, and controls an image signal accumulation time of the second image according to these numbers.

11. The imaging system of claim 5, wherein:

the image processing unit identifies a high-brightness block and searches the periphery of the high-brightness block for medium-brightness blocks and high-brightness blocks, the found high-brightness blocks being grouped with the high-brightness block.

12. The imaging system of claim 6, wherein:

the image processing unit identifies a high-brightness block and searches the periphery of the high-brightness block for medium-brightness blocks and high-brightness blocks, the found high-brightness blocks being grouped with the high-brightness block.

13. The imaging system of claim 7, wherein:

the image processing unit identifies a high-brightness block and searches the periphery of the high-brightness block for medium-brightness blocks and high-brightness blocks, the found high-brightness blocks being grouped with the high-brightness block.

14. The imaging system of claim 8, wherein:

the image processing unit identifies a high-brightness block and searches the periphery of the high-brightness block for medium-brightness blocks and high-brightness blocks, the found high-brightness blocks being grouped with the high-brightness block.

15. The imaging system of claim 9, wherein:

the image processing unit identifies a high-brightness block and searches the periphery of the high-brightness block for medium-brightness blocks and high-brightness blocks, the found high-brightness blocks being grouped with the high-brightness block.

16. The imaging system of claim 10, wherein:

the image processing unit identifies a high-brightness block and searches the periphery of the high-brightness block for medium-brightness blocks and high-brightness blocks, the found high-brightness blocks being grouped with the high-brightness block.

17. The imaging system of claim 1, wherein:

the infrared light emitter, image pickup unit, and image processing unit are installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

18. The imaging system of claim 2, wherein:

the infrared light emitter, image pickup unit, and image processing unit are installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

19. The imaging system of claim 3, wherein:

the infrared light emitter, image pickup unit, and image processing unit are installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

20. The imaging system of claim 4, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

21. The imaging system of claim 5, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

22. The imaging system of claim 6, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

23. The imaging system of claim 7, wherein:

the infrared light emitter, image pickup unit, and image processing unit are installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

24. The imaging system of claim 8, wherein:

the infrared light emitter, image pickup unit, and image processing unit are installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

25. The imaging system of claim 9, wherein:

the infrared light emitter, image pickup unit, and image processing unit are installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

26. The imaging system of claim 10, wherein:

the infrared light emitter, image pickup unit, and image processing unit are installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;  
and

the image pickup unit picks up an image of the outer side of the vehicle.

27. The imaging system of claim 11, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;  
and

the image pickup unit picks up an image of the outer side of the vehicle.

28. The imaging system of claim 12, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;  
and

the image pickup unit picks up an image of the outer side of the vehicle.

29. The imaging system of claim 13, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;  
and

the image pickup unit picks up an image of the outer side of the vehicle.



30. The imaging system of claim 14, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

31. The imaging system of claim 15, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.

32. The imaging system of claim 16, wherein:

the infrared light emitter, image pickup unit, and image processing unit are  
installed in a vehicle;

the infrared light emitter emits infrared light toward the outer side of the vehicle;

and

the image pickup unit picks up an image of the outer side of the vehicle.